

SHARP®

SCIENTIFIC CALCULATOR

EL-509W
EL-531W
EL-531WG
MODEL EL-531WH
OPERATION MANUALPRINTED IN CHINA / IMPRIMÉ EN CHINE / IMPRESO EN CHINA
04LGK (TINSE0706EH02)**INTRODUCTION**

Thank you for purchasing the SHARP Scientific Calculator Model EL-509W/531W/531WG/531WH.

About the calculation examples (including some formulas and tables), refer to the reverse side of this English manual. Refer to the number on the right of each title on the manual for use. After reading this manual, store it in a convenient location for future reference.

Note: Some of the models described in this manual may not be available in some countries.

Operational Notes

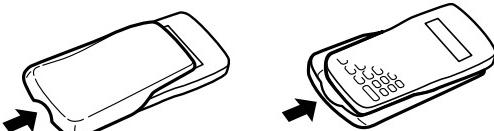
- Do not carry the calculator around in your back pocket, as it may break when you sit down. The display is made of glass and is particularly fragile.
- Keep the calculator away from extreme heat such as on a car dashboard or near a heater, and avoid exposing it to excessively humid or dusty environments.
- Since this product is not waterproof, do not use it or store it where fluids, for example water, can splash onto it. Raindrops, water spray, juice, coffee, steam, perspiration, etc. will also cause malfunction.
- Clean with a soft, dry cloth. Do not use solvents or a wet cloth.
- Do not drop it or apply excessive force.
- Never dispose of batteries in a fire.
- Keep batteries out of the reach of children.
- This product, including accessories, may change due to upgrading without prior notice.

NOTICE

- SHARP strongly recommends that separate permanent written records be kept of all important data. Data may be lost or altered in virtually any electronic memory product under certain circumstances. Therefore, SHARP assumes no responsibility for data lost or otherwise rendered unusable whether as a result of improper use, repairs, defects, battery replacement, use after the specified battery life has expired, or any other cause.
- SHARP will not be liable nor responsible for any incidental or consequential economic or property damage caused by misuse and/or malfunctions of this product and its peripherals, unless such liability is acknowledged by law.

- Press the RESET switch (on the back), with the tip of a ball-point pen or similar object, only in the following cases. Do not use an object with a breakable or sharp tip. Note that pressing the RESET switch erases all data stored in memory.
 - When using for the first time
 - After replacing the batteries
 - To clear all memory contents
 - When an abnormal condition occurs and all keys are inoperative.

If service should be required on this calculator, use only a SHARP servicing dealer, SHARP approved service facility, or SHARP repair service where available.

Hard Case**DISPLAY**

- During actual use, not all symbols are displayed at the same time.
- Certain inactive symbols may appear visible when viewed from a far off angle.
- Only the symbols required for the usage under instruction are shown in the display and calculation examples of this manual.

↔ : Appears when the entire equation cannot be displayed. Press **◀/▶** to see the remaining (hidden) section.

▲/▼ : Indicates that data can be visible above/below the screen. These indications may appear when menu, multi-line playback, and statistics data are displayed. Press **▲/▼** to scroll up/down the view.

2ndF : Appears when **[2ndF]** is pressed, indicating that the functions shown in orange are enabled.

HYP : Indicates that **[hyp]** has been pressed and the hyperbolic functions are enabled. If **[2ndF][arc hyp]** are pressed, the symbols "2ndF HYP" appear, indicating that inverse hyperbolic functions are enabled.

ALPHA: Indicates that **[ALPHA]** (STAT VAR), **[STO]** or **[RCL]** has been pressed, and entry (recall) of memory contents and recall of statistics can be performed.

FIX/SCI/ENG: Indicates the notation used to display a value and changes by SET UP menu.

DEG/RAD/GRAD: Indicates angular units and changes each time **[DRG]** is pressed.

STAT : Appears when statistics mode is selected.

M : Indicates that a numerical value is stored in the independent memory.

BEFORE USING THE CALCULATOR**Key Notation Used in this Manual**

In this manual, key operations are described as follows:

e^x	To specify e^x :	2ndF	e^x
In	To specify ln :	In	
	To specify F :	ALPHA	F

Functions that are printed in orange above the key require **[2ndF]** to be pressed first before the key. When you specify the memory, press **[ALPHA]** first. Numbers for input value are not shown as keys, but as ordinary numbers.

Power On and Off

Press **[ON/C]** to turn the calculator on, and **[2ndF][OFF]** to turn it off.

Clearing the Entry and Memories

Clearing methods are described in the table as follows:

Clearing operation	Entry (Display)	M* ¹	A-F, X, Y* ²	STAT* ⁴	STAT VAR* ⁵
[ON/C]	○	×	×	×	×
[2ndF] [CA]	○	×	○	○	○
[2ndF] [M-CLR] [0] [0] * ⁶	○	○	○	○	○
[2ndF] [M-CLR] [1] [0] * ⁷	○	○	○	○	○
RESET switch	○	○	○	○	○

○ : Clear × : Retain

*¹ Independent memory M.

*² Temporary memory A-F, X and Y.

*³ Last answer memory.

*⁴ Statistical data (entered data).

*⁵ \bar{x} , s_x , σ_x , n , Σx , Σx^2 , \bar{y} , s_y , σ_y , Σy , Σy^2 , Σxy , r , a , b , c .

*⁶ All variables are cleared. See 'About the Memory clear key' for details.

*⁷ This key combination functions the same as the **RESET** switch. See 'About the Memory clear key' for details.

[About the Memory clear key]

Press **[2ndF] [M-CLR]** to display the menu.

MEM	RESET
0	1

- To clear all variables (M, A-F, X, Y, ANS, STAT VAR), press **[0] [0]** or **[0] [ENT]**.
- To **RESET** the calculator, press **[1] [0]** or **[1] [ENT]**. The **RESET** operation will erase all data stored in memory, and restore the calculator's default setting.

Entering and Correcting the Equation**[Cursor keys]**

- Press **◀** or **▶** to move the cursor. You can also return to the equation after getting an answer by pressing **▶** (**◀**). See the next section for using the **▲** and **▼** keys.
- In the SET UP menu and other locations, use the **◀** or **▶** key to move the flashing cursor, then press **[ENT]** (**=** key). If you need to scroll up/down the view, use the **▲** or **▼** key.

[Insert mode and Overwrite mode in the Equation display]

- This calculator has two editing modes: insert mode (default), and overwrite mode. Pressing **[2ndF] [INS]** switches between the two modes. A triangular cursor indicates that an entry will be inserted at the cursor, while the rectangular cursor indicates to overwrite preexisting data as you make entries.
- To insert a number in the insert mode, move the cursor to the place immediately after where you wish to insert, then make a desired entry. In the overwrite mode, data under the cursor will be overwritten by the number you enter.
- This mode setting will be retained until the next **RESET** operation is executed.

[Deletion key]

- To delete a number/function, move the cursor to the number/function you wish to delete, then press **DEL**. If the cursor is located at the right end of an equation, the **DEL** key will function as a back space key.

Multiline Playback function [1]

This calculator is equipped with a function to recall previous equations in the normal mode. Equations also include calculation ending instructions such as “=” and a maximum of 142 characters can be stored in memory. When the memory is full, stored equations are deleted in the order of the oldest first. Pressing **▲** will display the previous equation and the answer. Further pressing **▲** will display preceding equations (after returning to the previous equation, press **▼** to view equations in order). In addition, **2ndF ▲** can be used to jump to the oldest equation.

- To edit an equation after recalling it, press **▶** (**◀**).
- To edit the displayed equation, press **▶** (**◀**) immediately after obtaining a calculation answer.
- The multi-line memory is cleared by the following operations: **2ndF CA**, **2ndF OFF** (including the Automatic Power Off feature), mode change, memory clear (**2ndF M-CLR**), RESET, **2ndF RANDOM**, **ALPHA (RCL)** **ANS**, constant calculation, chain calculation, angle unit conversion, coordinate conversion, N-base conversion, numerical value storage to the temporary memories and independent memory, and input/deletion of statistical data.

Priority Levels in Calculation

This calculator performs operations according to the following priority:

- ① Fractions ($\frac{1}{4}$, etc.)
- ② Functions preceded by their argument (x^1 , x^2 , $n!$, etc.)
- ③ Y^x , \sqrt{x}
- ④ Implied multiplication of a memory value ($2Y$, etc.)
- ⑤ Functions followed by their argument (sin, cos, etc.)
- ⑥ Implied multiplication of a function ($2\sin 30$, etc.)
- ⑦ nCr , nPr
- ⑧ \times , \div , $9 +$, $-$
- ⑨ AND
- ⑩ OR, XOR, XNOR
- ⑪ =, M+, M-, $\Rightarrow M$, $\Rightarrow DEG$, $\Rightarrow RAD$, $\Rightarrow GRAD$, DATA, CD, $\rightarrow \theta$, $\rightarrow xy$ and other calculation ending instructions
- If parentheses are used, parenthesized calculations have precedence over any other calculations.

INITIAL SET UP

Mode Selection

Normal mode (NORMAL): **MODE 0**

Used to perform arithmetic operations and function calculations.

Statistics mode (STAT): **MODE 1**

Used to perform statistical calculations.

When executing mode selection, temporary memories, statistical variables, statistical data and last answer memory will be cleared even when reselecting the same mode.

SET UP menu

Press **SETUP** to display the SET UP menu.

FSE	TAB
0	

- A menu item can be selected by:
 - moving the flashing cursor by using **▶** (**◀**), then press **ENT** (**=** key), or
 - pressing the number key corresponding to the menu item number.
- If **▲** or **▼** is displayed on the screen, press **▲** or **▼** to view the previous/next menu screen.
- Press **ON/C** to exit the SET UP menu.

[Selecting the Display Notation and Decimal Places]

The calculator has four display notation systems (Floating point, Fixed decimal point, Scientific notation and Engineering notation) for displaying calculation results.

- When the FIX, SCI, or ENG symbol is displayed, the number of decimal places (TAB) can be set to any value between 0 and 9. Displayed values will be reduced to the corresponding number of digits.
- If a floating point number does not fit in the specified range, the calculator will display the result using the scientific notation (exponential notation) system. See ‘Setting the Floating Point Numbers System in Scientific Notation’ for details.
- Press **SETUP**, followed by **0**, to display the following submenu:

-FIX	SCI	ENG	→	^NORM1	NORM2
0	1	2		3	4

[Setting the Floating Point Numbers System in Scientific Notation]

The calculator has two settings for displaying a floating point number: NORM1 (default setting) and NORM2. In each display setting, a number is automatically displayed in scientific notation outside a preset range:

- NORM1: $0.000000001 \leq |x| \leq 9999999999$
- NORM2: $0.01 \leq |x| \leq 9999999999$

100000÷3=

[Floating point (NORM1)] **ON/C** 100000 **÷** 3 **=** 33'333.33333

→[Fixed decimal point] **SET UP** 0 0 33'333.33333

[TAB set to 2] **SET UP** 1 2 33'333.33

→[Scientific notation] **SET UP** 0 1 3.33×10^{04}

→[Engineering notation] **SET UP** 0 2 33.33 $\times 10^{03}$

→[Floating point (NORM1)] **SET UP** 0 3 33'333.33333

3÷1000=

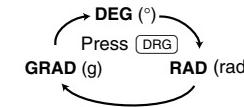
[Floating point (NORM1)] **ON/C** 3 **÷** 1000 **=** 0.003

→[Floating point (NORM2)] **SET UP** 0 4 $3. \times 10^{-03}$

→[Floating point (NORM1)] **SET UP** 0 3 0.003

Determination of the Angular Unit

In this calculator, the following three angular units (degrees, radians, and grads) can be specified.



SCIENTIFIC CALCULATIONS

- Press **MODE 0** to select the normal mode.
- In each example, press **ON/C** to clear the display. And if the FIX, SCI, or ENG indicator is displayed, clear the indicator by selecting ‘NORM1’ from the SET UP menu.

Arithmetic Operations [2]

- The closing parenthesis **)** just before **=** or **M+** may be omitted.

Constant Calculations [3]

- In constant calculations, the addend becomes a constant. Subtraction and division are performed in the same manner. For multiplication, the multiplicand becomes a constant.
- When performing calculations using constants, constants will be displayed as K.

Functions [4]

- Refer to the calculation examples of each function.
- Before starting calculations, specify the angular unit.

Random Function

The Random function has four settings for use in the normal or statistics mode. (This function cannot be selected while using the N-Base function.) Press **ON/C** to exit.

- The generated pseudo-random number series is stored in memory Y. Each random number is based on a number series.

[Random Numbers]

A pseudo-random number, with three significant digits from 0 up to 0.999, can be generated by pressing **2ndF RANDOM 0 ENT**. To generate the next random number, press **ENT**.

[Random Dice]

To simulate a die-rolling, a random integer between 1 and 6 can be generated by pressing **2ndF RANDOM 1 ENT**. To generate the next random dice number, press **ENT**.

[Random Coin]

To simulate a coin flip, 0 (head) or 1 (tail) can be randomly generated by pressing **2ndF RANDOM 2 ENT**. To generate the next random coin number, press **ENT**.

[Random Integer]

An integer between 0 and 99 can be generated randomly by pressing **2ndF RANDOM 3 ENT**. To generate the next random integer number, press **ENT**.

Angular Unit Conversions [5]

Each time **2ndF DRG** are pressed, the angular unit changes in sequence.

Memory Calculations [6]

This calculator has 8 temporary memories (A-F, X and Y), one independent memory (M) and one last answer memory (ANS). The independent memory and temporary memories are only available in the normal mode.

[Temporary memories (A-F, X and Y)]

Press **STO** and a corresponding variable key to store a value in memory.

Press **RCL** and a corresponding variable key to recall a value from the memory.

To place a variable in an equation, press **ALPHA**, followed by a desired variable key.

[Independent memory (M)]

In addition to all the features of temporary memories, a value can be added to or subtracted from an existing memory value.

Press **ON/C STO M** to clear the independent memory (M).

[Last answer memory (ANS)]

The calculation result obtained by pressing **=** or any other calculation ending instruction is automatically stored in the last answer memory.

Note:

- Calculation results from the functions indicated below are automatically stored in memories X or Y. For this reason, when using these functions, be careful with the use of memories X and Y.
 - Random function Y memory
 - $\rightarrow r\theta$, $\rightarrow xy$ X memory (r or x), Y memory (θ or y)
- Temporary memories and last answer memory are cleared even when the same mode is reselected.
- Use of **RCL** or **ALPHA** will recall the value stored in memory using up to 14 digits.

Chain Calculations [7]

- This calculator allows the previous calculation result to be used in the following calculation.

- The previous calculation result will not be recalled after entering multiple instructions.
- In the case of utilizing postfix functions ($\sqrt{}$, sin, etc.), you can perform a chain calculation even when the previous calculation result is cleared by the use of the **[ON/C]** key.

Fraction Calculations [8]

This calculator performs arithmetic operations and memory calculations using fractions, and conversion between a decimal number and a fraction.

- If the number of digits to be displayed is greater than 10, the number is converted to and displayed as a decimal number.

Binary, Pental, Octal, Decimal, and Hexadecimal

Operations (N-Base) [9]

This calculator can perform conversions between numbers expressed in binary, pental, octal, decimal and hexadecimal systems. It can also perform the four basic arithmetic operations, calculations with parentheses and memory calculations using binary, pental, octal, decimal, and hexadecimal numbers. In addition, the calculator can carry out the logical operations AND, OR, NOT, NEG, XOR and XNOR on binary, pental, octal and hexadecimal numbers.

Conversion to each system is performed by the following keys:

[2ndF] [BIN]: Converts to the binary system. "**b**" appears.

[2ndF] [PEN]: Converts to the pental system. "**P**" appears.

[2ndF] [OCT]: Converts to the octal system. "**o**" appears.

[2ndF] [HEX]: Converts to the hexadecimal system. "**H**" appears.

[2ndF] [DEC]: Converts to the decimal system. "**b**", "**P**", "**o**", and "**H**" disappear from the display.

Conversion is performed on the displayed value when these keys are pressed.

Note: In this calculator, the hexadecimal numbers A – F are entered by pressing **[yx] A**, **[yx] B**, **[yx] C**, **[yx] D**, **[log] E**, and **[ln] F**, and displayed as follows:

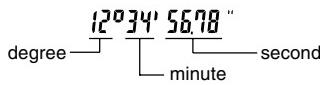
$$A \rightarrow \mathcal{A}, B \rightarrow b, C \rightarrow \ell, D \rightarrow d, E \rightarrow \mathcal{E}, F \rightarrow \mathcal{F}$$

In the binary, pental, octal, and hexadecimal systems, fractional parts cannot be entered. When a decimal number having a fractional part is converted into a binary, pental, octal, or hexadecimal number, the fractional part will be truncated. Likewise, when the result of a binary, pental, octal, or hexadecimal calculation includes a fractional part, the fractional part will be truncated. In the binary, pental, octal, and hexadecimal systems, negative numbers are displayed as a complement.

Time, Decimal and Sexagesimal Calculations [10]

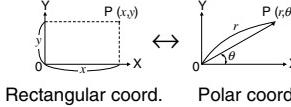
Conversion between decimal and sexagesimal numbers can be performed. In addition, the four basic arithmetic operations and memory calculations can be carried out using the sexagesimal system.

Notation for sexagesimal is as follows:



Coordinate Conversions [11]

- Before performing a calculation, select the angular unit.



Rectangular coord. Polar coord.

- The calculation result is automatically stored in memories X and Y.

Value of r or x: X memory

Value of θ or y: Y memory

Modify Function [12]

In this calculator, calculation results are internally obtained in scientific notation with up to 14 digits for the mantissa. However, since calculation results are displayed in the form designated by the display notation and the number of decimal places indicated, the internal calculation result may differ from that shown in the display. By using the modify function, the internal value is converted to match that of the display, so that the displayed value can be used without change in subsequent operations.

STATISTICAL CALCULATIONS [13]

Statistical calculations are performed in the statistics mode. Press **[MODE] 1** to select the statistics mode. This calculator performs the seven statistical calculations indicated below. After selecting the statistics mode, select the desired sub-mode by pressing the number key corresponding to your choice.

When changing to the statistical sub-mode, press the corresponding number key after performing the operation to select the statistics mode (press **[MODE] 1**).

0 (SD)	: Single-variable statistics
1 (LINE)	: Linear regression calculation
2 (QUAD)	: Quadratic regression calculation
3 (EXP)	: Exponential regression calculation
4 (LOG)	: Logarithmic regression calculation
5 (PWR)	: Power regression calculation
6 (INV)	: Inverse regression calculation

The following statistics can be obtained for each statistical calculation (refer to the table below):

Single-variable statistical calculation

Statistics of ①

Linear regression calculation

Statistics of ① and ② and, in addition, estimate of y for a given x (estimate y') and estimate of x for a given y (estimate x')

Exponential regression, Logarithmic regression, Power regression, and Inverse regression calculation

Statistics of ① and ②. In addition, estimate of y for a given x and estimate of x for a given y. (Since the calculator converts each formula into a linear regression formula before actual calculation takes place, it obtains all statistics, except coefficients a and b, from converted data rather than entered data.)

Quadratic regression calculation

Statistics of ① and ② and coefficients a, b, c in the quadratic regression formula ($y = a + bx + cx^2$). (For quadratic regression calculations, no correlation coefficient (r) can be obtained.) When there are two x' values, press **[2ndF] [↔]**.

When performing calculations using a, b and c, only one numeric value can be held.

①	\bar{x}	Mean of samples (x data)
	s_x	Sample standard deviation (x data)
	σ_x	Population standard deviation (x data)
	n	Number of samples
	Σx	Sum of samples (x data)
	Σx^2	Sum of squares of samples (x data)
②	\bar{y}	Mean of samples (y data)
	s_y	Sample standard deviation (y data)
	σ_y	Population standard deviation (y data)
	Σy	Sum of samples (y data)
	Σy^2	Sum of squares of samples (y data)
	Σxy	Sum of products of samples (x, y)
	r	Correlation coefficient
	a	Coefficient of regression equation
	b	Coefficient of regression equation
	c	Coefficient of quadratic regression equation

- Use **[ALPHA]** and **[RCL]** to perform a STAT variable calculation.

Data Entry and Correction [14]

Entered data are kept in memory until **[2ndF] [CA]** are pressed or mode selection. Before entering new data, clear the memory contents.

[Data Entry]

Single-variable data

Data **[DATA]** **Data** **[x,y]** **frequency** **[DATA]** (To enter multiples of the same data)

Two-variable data

Data x **[x,y]** **Data y** **[DATA]** **Data x** **[x,y]** **Data y** **[x,y]** **frequency** **[DATA]** (To enter multiples of the same data x and y.)

- Up to 100 data items can be entered. With the single-variable data, a data item without frequency assignment is counted as one data item, while an item assigned with frequency is stored as a set of two data items. With the two-variable data, a set of data items without frequency assignment is counted as two data items, while a set of items assigned with frequency is stored as a set of three data items.

[Data Correction]

Correction prior to pressing **[DATA]** immediately after a data entry:

Delete incorrect data with **[ON/C]**, then enter the correct data.

Correction after pressing **[DATA]**:

Use **▲** **▼** to display the data previously entered.

Press **▼** to display data items in ascending (oldest first) order. To reverse the display order to descending (latest first), press the **▲** key.

Each item is displayed with 'Xn=' , 'Yn=' , or 'Nn=' (n is the sequential number of the data set).

Display the data item to modify, input the correct value, then press **[DATA]**. Using **[x,y]**, you can correct the values of the data set all at once.

- When **▲** or **▼** appears, more data items can be browsed by pressing **▲** or **▼**.
- To delete a data set, display an item of the data set to delete, then press **[2ndF] [CD]**. The data set will be deleted.
- To add a new data set, press **[ON/C]** and input the values, then press **[DATA]**.

Type	Regression formula
Linear	$y = a + bx$
Exponential	$y = a \cdot e^{bx}$
Logarithmic	$y = a + b \cdot \ln x$
Power	$y = a \cdot x^b$
Inverse	$y = a + b \frac{1}{x}$
Quadratic	$y = a + bx + cx^2$

In the statistical calculation formulas, an error will occur when:

- The absolute value of the intermediate result or calculation result is equal to or greater than 1×10^{100} .
- The denominator is zero.
- An attempt is made to take the square root of a negative number.
- No solution exists in the quadratic regression calculation.

ERROR AND CALCULATION RANGES

Errors

An error will occur if an operation exceeds the calculation ranges, or if a mathematically illegal operation is attempted. When an error occurs, pressing \leftarrow (or \rightarrow) automatically moves the cursor back to the place in the equation where the error occurred. Edit the equation or press $[ON/C]$ to clear the equation.

Error Codes and Error Types

Syntax error (Error 1):

- An attempt was made to perform an invalid operation.

Ex. 2 [2ndF] \rightarrow r_b

Calculation error (Error 2):

- The absolute value of an intermediate or final calculation result equals or exceeds 10^{100} .
- An attempt was made to divide by 0 (or an intermediate calculation resulted in zero).
- The calculation ranges were exceeded while performing calculations.

Depth error (Error 3):

- The available number of buffers was exceeded. (There are 10 buffers* for numeric values and 24 buffers for calculation instructions). *5 buffers in STAT mode.
- Data items exceeded 100 in the statistics mode.

Equation too long (Error 4):

- The equation exceeded its maximum input buffer (142 characters). An equation must be shorter than 142 characters.

Calculation Ranges

[16]

- Within the ranges specified, this calculator is accurate to ± 1 of the least significant digit of the mantissa. However, a calculation error increases in continuous calculations due to accumulation of each calculation error. (This is the same for j^x , $x\sqrt{-}$, nl , e^x , ln , etc., where continuous calculations are performed internally.)

Additionally, a calculation error will accumulate and become larger in the vicinity of inflection points and singular points of functions.

- Calculation ranges

$\pm 10^{-99} \sim \pm 9.999999999 \times 10^{99}$ and 0.

If the absolute value of an entry or a final or intermediate result of a calculation is less than 10^{-99} , the value is considered to be 0 in calculations and in the display.

BATTERY REPLACEMENT

Notes on Battery Replacement

Improper handling of batteries can cause electrolyte leakage or explosion. Be sure to observe the following handling rules:

- Replace both batteries at the same time.
- Do not mix new and old batteries.
- Make sure the new batteries are the correct type.
- When installing, orient each battery properly as indicated in the calculator.
- Batteries are factory-installed before shipment, and may be exhausted before they reach the service life stated in the specifications.

Notes on erasure of memory contents

When the battery is replaced, the memory contents are erased. Erasure can also occur if the calculator is defective or when it is repaired. Make a note of all important memory contents in case accidental erasure occurs.

When to Replace the Batteries

[EL-509W/531W/531WH] If the display has poor contrast, the batteries require replacement.

[EL-531WG] If the display has poor contrast or nothing appears on the display even when $[ON/C]$ is pressed in dim lighting, it is time to replace the batteries.

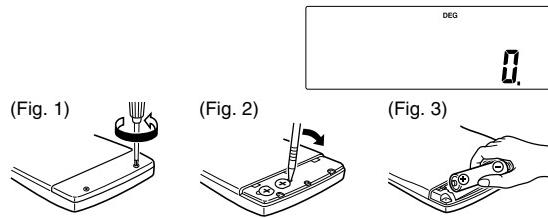
Cautions

- Fluid from a leaking battery accidentally entering an eye could result in serious injury. Should this occur, wash with clean water and immediately consult a doctor.
- Should fluid from a leaking battery come in contact with your skin or clothes, immediately wash with clean water.
- If the product is not to be used for some time, to avoid damage to the unit from leaking batteries, remove them and store in a safe place.
- Do not leave exhausted batteries inside the product.

- Do not fit partially used batteries, and be sure not to mix batteries of different types.
- Keep batteries out of the reach of children.
- Exhausted batteries left in the calculator may leak and damage the calculator.
- Explosion risk may be caused by incorrect handling.
- Do not throw batteries into a fire as they may explode.

Replacement Procedure

- Turn the power off by pressing [2ndF] [OFF].
- Remove two screws. (Fig. 1)
- Slide the battery cover slightly and lift it to remove.
- [EL-509W/531W/531WG] Remove the used batteries by prying them out with a ball-point pen or other similar pointed device. (Fig. 2)
- [EL-531WH] Remove the used battery.
- [EL-509W/531W/531WG] Install two new batteries. Make sure the "+" side is facing up.
- [EL-531WH] Install one new battery. First insert the "⊖" side toward the spring. (Fig. 3)
- Replace the cover and screws.
- Press the RESET switch (on the back).
- Make sure that the display appears as shown below. If the display does not appear as shown, remove the batteries reinstall them and check the display once again.



Automatic Power Off Function

This calculator will turn itself off to save battery power if no key is pressed for approximately 10 minutes.

SPECIFICATIONS

Calculations:	Scientific calculations, statistical calculations, etc.
Internal calculations:	Mantissas of up to 14 digits
Pending operations:	24 calculations 10 numeric values (5 numeric values in STAT mode)
Power source:	[EL-509W/531W] 3V ≈ (DC): Alkaline batteries (LR44 or equivalent) × 2 [EL-531WG] Built-in solar cells 3V ≈ (DC): Backup batteries (Alkaline batteries (LR44 or equivalent) × 2) [EL-531WH] 1.5V ≈ (DC): Heavy duty manganese battery (size AA or R6) × 1
Power consumption:	[EL-509W/531W] 0.0002 W [EL-531WH] 0.0001 W
Operating time:	[EL-509W/531W] Approx. 5000 hours [EL-531WH] Approx. 17000 hours when continuously displaying 55555. at 25°C (77°F). Varies according to use and other factors.
Operating temperature:	0°C – 40°C (32°F – 104°F)
External dimensions:	[EL-509W/531W/531WG] 79.6 mm (W) × 154.5 mm (D) × 13.2 mm (H) 3-1/8" (W) × 6-3/32" (D) × 23/32" (H) [EL-531WH] 79.6 mm (W) × 154.5 mm (D) × 18.2 mm (H) 3-1/8" (W) × 6-3/32" (D) × 23/32" (H)
Weight:	[EL-509W/531W] Approx. 95 g (0.21 lb) (Including batteries) [EL-531WG] Approx. 97 g (0.22 lb) (Including batteries) [EL-531WH] Approx. 110 g (0.25 lb) (Including battery)
Accessories:	[EL-509W/531W/531WG] Batteries × 2 (installed), operation manual, quick reference card and hard case [EL-531WH] Battery × 1 (installed), operation manual, quick reference card and hard case

FOR MORE INFORMATION ABOUT SCIENTIFIC CALCULATOR

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<http://sharp-world.com/calculator/>

SHARP
SHARP CORPORATION

EL-509W
EL-531W
EL-531WG
EL-531WH

CALCULATION EXAMPLES**ANWENDUNGSBEISPIELE****EXEMPLES DE CALCUL****EJEMPLOS DE CÁLCULO****EXEMPLOS DE CÁLCULO****ESEMPIO DI CALCOLO****REKENVOORBEELDEN****PÉLDASZÁMÍTÁSOK****PRÍKLADY VÝPOČTU****RÄKNEEXEMPEL****LASKENTAESIMERKKEJÄ****ПРИМЕРЫ ВЫЧИСЛЕНИЙ****UDREGNINGSEKSEMPLER****ตัวอย่างการคำนวณ**

نماذج للحسابات

计算例子**CONTOH-CONTOH PENGHITUNGAN****CONTOH-CONTOH PERHITUNGAN****[1]** ▲ ▼

① $3(5+2)=$	ON/C 3 (+ 5 + 2) =	21.
② $3 \times 5+2=$	3 × 5 + 2 =	17.
③ $3 \times 5+3 \times 2=$	3 × 5 + 3 × 2 =	21.
→ ①	2ndF ▲	21.
→ ②	▼	17.
→ ③	▼	21.
→ ②	▲	17.

[2] + - × ÷ () +/- Exp

$45+285 \div 3=$	ON/C 45 + 285 ÷ 3 =	140.
$\frac{18+6}{15-8}=$	() 18 + 6) ÷ () 15 - 8 =	3.428571429
$42 \times (-5) + 120 =$	42 (×) + / - 5 + 120 =	-90.
	*1 (×) + / -	
$(5 \times 10^3) \div (4 \times 10^{-3}) =$	5 Exp 3 ÷ 4 Exp +/- 3 =	1'250'000.

[3]

34+57=	34 + 57 =	91.
45+57=	45 =	102.
79-59=	79 - 59 =	20.
56-59=	56 =	-3.
56 ÷ 8=	56 ÷ 8 =	7.
92 ÷ 8=	92 =	11.5
68 × 25=	68 × 25 =	1'700.
68 × 40=	40 =	2'720.

[4]	sin cos tan sin ⁻¹ cos ⁻¹ tan ⁻¹ π DRG hyp arc hyp ln log e ^x 10 ^x X ⁻¹ X ² X ³ √ y ^x x ^y 3√ n! nPr nCr %	0.866025403
sin60[°]=	ON/C sin 60 =	0.866025403
cos ^π /4[rad]=	DRG cos () π ÷ 4 () =	0.707106781
tan ⁻¹ 1=[g]	DRG 2ndF tan ⁻¹ 1 = DRG	50.
(cosh 1.5 +	ON/C (hyp cos 1.5 + hyp sinh 1.5) ² =	20.08553692
tanh ⁻¹ 5/7=	2ndF arc hyp tan () 5 ÷ 7) =	0.895879734
ln 20 =	ln 20 =	2.995732274
log 50 =	log 50 =	1.698970004
e ³ =	2ndF e ^x 3 =	20.08553692
10 ^{1.7} =	2ndF 10 ^x 1.7 =	50.11872336
1 1/7 =	6 2ndF X ⁻¹ + 7 2ndF X ⁻¹ =	0.309523809
8 ⁻² - 3 ⁴ × 5 ² =	8 y ^x + / - 2 - 3 y ^x 4 × 5 X ² =	-2'024.984375
(12 ³) ^{1/4} =	12 y ^x 3 y ^x 4 2ndF X ⁻¹ =	6.447419591
8 ³ =	8 X ³ =	512.
√49 - 4 √81 =	√ 49 - 4 2ndF √ 81 =	4.
3 √27 =	2ndF 3 √ 27 =	3.
4! =	4 2ndF n! =	24.
10P ₃ =	10 2ndF nPr 3 =	720.
5C ₂ =	5 2ndF nCr 2 =	10.
500 × 25% =	500 × 25 2ndF %	125.
120 ÷ 400 = ?% =	120 ÷ 400 2ndF %	30.
500 + (500 × 25%) =	500 + 25 2ndF %	625.
400 - (400 × 30%) =	400 - 30 2ndF %	280.

- The range of the results of inverse trigonometric functions
- Der Ergebnisbereich für inverse trigonometrische Funktionen
- Plage des résultats des fonctions trigonométriques inverses
- El rango de los resultados de funciones trigonométricas inversas
- Gama dos resultados das trigonométricas inversas
- La gamma dei risultati di funzioni trigonometriche inverse
- Het bereik van de resultaten van inverse trigonometrie
- Az inverz trigonometriai funkciók eredmény-tartománya
- Rozsáv výsledků inverzních trigonometrických funkcí
- Omfang för resultaten av omvänta trigonometriska funktioner
- Käänteisten trigonometristen funktioiden tulosten alue
- Диапазон результатов обратных тригонометрических функций
- Område for resultater af omvendte trigonometriske funktioner
- ଶିଖ୍ୟାମନ୍ତ୍ରକାର୍ଯ୍ୟର ଫର୍ମାଟରେ ପରିପାଦିତ କାର୍ଯ୍ୟକଣନ୍ତିର ପରିମାଣ
- نطاق تنتائج الدول المثلثة المعكسية
- 反三角函数计算结果的范围
- Julat hasil fungsi trigonometri songsang
- Kisaran hasil fungsi trigonometri inversi

θ = sin ⁻¹ x, θ = tan ⁻¹ x	θ = cos ⁻¹ x
DEG	-90 ≤ θ ≤ 90
RAD	- $\frac{\pi}{2}$ ≤ θ ≤ $\frac{\pi}{2}$
GRAD	-100 ≤ θ ≤ 100

[5] DRG▶

90° → [rad]	ON/C 90 2ndF DRG▶	1.570796327
→ [g]	2ndF DRG▶	100.
→ [°]	2ndF DRG▶	90.
sin ⁻¹ 0.8 = [°]	2ndF sin ⁻¹ 0.8 =	53.13010235
→ [rad]	2ndF DRG▶	0.927295218
→ [g]	2ndF DRG▶	59.03344706
→ [°]	2ndF DRG▶	53.13010235

[6] ALPHA RCL STO M+ M- ANS

A=56	ON/C 56 STO A	56.
B=68	68 STO B	68.
A÷2+B×4=	ALPHA A ÷ 2 + ALPHA B × 4 =	300.
	ON/C 8 × 2 STO M	16.
24÷(8×2)=	24 ÷ ALPHA M =	1.5
(8×2)×5=	ALPHA M × 5 =	80.
	ON/C STO M	0.
\$150×3:M1	150 × 3 M+	450.
+)\$250:M2 =M1+250	250 M+	250.
-)M2×5%	RCL M × 5 2ndF %	35.
M	2ndF M- RCL M	665.
\$1=¥110	110 STO Y	110.
¥26,510=?	26510 ÷ RCL Y =	241.
\$2,750=¥?	2750 × RCL Y =	302'500.
r = 3cm	3 STO Y	3.
πr² = ?	π ALPHA Y X² =	28.27433388
(r → Y)		
$\frac{24}{4+6} = 2.4 \dots (A)$	24 ÷ (4 + 6)	2.4
$3 \times (A) + 60 \div (A) =$	3 × ALPHA ANS + 60 ÷ ALPHA ANS =	32.2

[7]

6+4=ANS	ON/C 6 + 4 =	10.
ANS+5	+ 5 =	15.
8×2=ANS	8 × 2 =	16.
ANS²	X² =	256.
44+37=ANS	44 + 37 =	81.
√ANS=	√ =	9.

[8] a^b/c d/c

$\frac{3}{2} + \frac{4}{3} = [a.b\%]$	ON/C 3 a ^b /c 1 a ^b /c 2 +	
→[a.xxx]	4 a ^b /c 3 -	4.833333333
→[d/c]	a ^b /c 2ndF d/c	29 r 6
$10^{\frac{2}{3}} =$	2ndF 10 ^x 2 a ^b /c 3	4.641588834
$(\frac{7}{5})^5 =$	7 a ^b /c 5 y ^x 5 =	16807 r 3125
$(\frac{1}{8})^{\frac{1}{3}} =$	1 a ^b /c 8 y ^x 1 a ^b /c 3	1 r 2
$\sqrt{\frac{64}{225}} =$	√ 64 a ^b /c 225 =	8 r 15

$\frac{2^3}{3^4} =$	(2 y ^x 3) a ^b /c	
	(3 y ^x 4) a ^b /c =	8 r 81
$\frac{1.2}{2.3} =$	1.2 a ^b /c 2.3 =	12 r 23
$\frac{1^{\circ}2'3''}{2} =$	1 D'M'S 2 D'M'S 3 a ^b /c 2 =	0°31'1.5"

$\frac{1 \times 10^3}{2 \times 10^3} =$	1 Eip 3 a ^b /c 2 Eip 3 =	1 r 2
---	-------------------------------------	-------

A = 7	ON/C 7 STO A	7.
$\frac{4}{A} =$	4 a ^b /c ALPHA A =	4 r 7

$1.25 + \frac{2}{5} = [a.xxx]$	1.25 + 2 a ^b /c 5 =	1.65
→[a ^b /c]	a ^b /c	1 r 13 r 20

1.65	ON/C 1.65 =	1.65
→[a ^b /c]	a ^b /c	1 r 13 r 20
→[d/c]	2ndF d/c	33 r 20

→[a.xxx]	a ^b /c	1.65
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$$* 4 r 5 r 6 = 4 \frac{5}{6}$$

[9] BIN PEN OCT HEX DEC NEG NOT AND OR XOR XNOR

DEC(25)→BIN	ON/C 2ndF →DEC 25 2ndF →BIN	11001 b
-------------	-----------------------------	---------

HEX(1AC)	2ndF →HEX 1AC	
→BIN	2ndF →BIN	110101100 b
→PEN	2ndF →PEN	3203 P
→OCT	2ndF →OCT	654 0
→DEC	2ndF →DEC	428.

BIN(1010-100)	2ndF →BIN (1010 - 100)	
x11 =	x 11 =	10010 b

BIN(111)→NEG	NEG 111 =	1111111001 b
--------------	-----------	--------------

HEX(1FF)+	2ndF →HEX 1FF 2ndF →OCT +	
OCT(512)=	512 =	1511 0
HEX(?)	2ndF →HEX	349 H

2FEC-	ON/C STO M 2ndF →HEX 2FEC -	
2C9E=(A)	2C9E M+	34E H
+2000-	2000	
1901=(B)	1901 M+	6FF H
(C)	RCL M	A4d H

1011 AND	ON/C 2ndF →BIN 1011 AND	
101 = (BIN)	101 =	1 b

5A OR C3 = (HEX)	2ndF →HEX 5A OR C3 =	db H
------------------	----------------------	------

NOT 10110 =	2ndF →BIN NOT 10110 =	1111101001 b
-------------	-----------------------	--------------

24 XOR 4 = (OCT)	2ndF →OCT 24 XOR 4 =	20 0
------------------	----------------------	------

B3 XNOR	2ndF →HEX B3 XNOR	
2D = (HEX)	2D =	FFFFFFFFFF61 H
→DEC	2ndF →DEC	-159.

[10] D'M'S ↔DEG

12°39'18.05"	ON/C 12 D'M'S 39 D'M'S 18.05	
→[10]	2ndF →DEG	12.65501389
123.678	123.678 2ndF →DEG	123°40'40.8"
→[60]		
3h30m45s +	3 D'M'S 30 D'M'S 45 + 6 D'M'S	
6h45m36s = [60]	45 D'M'S 36 =	10°16'21"
1234'56"12" +	1234 D'M'S 56 D'M'S 12 +	
0°0'34.567" = [60]	0 D'M'S 0 D'M'S 34.567 =	1234°56'47"
3h45m -	3 D'M'S 45 - 1.69 =	
1.69h = [60]	2ndF →DEG	2°3'36"
sin62°12'24" = [10]	sin 62 D'M'S 12 D'M'S 24	
	=	0.884635235

[11] →rθ →xy , ↵↔↔

$x = 6$	ON/C 6 2ndF , 4	7.211102551
$y = 4$	2ndF →rθ [r]	33.69006753
	2ndF ↵↔↔[θ]	7.211102551
	2ndF ↵↔↔[r]	

$r = 14$	14 2ndF , 36	11.32623792
$\theta = 36^\circ$	2ndF →xy [x]	8.228993532
	2ndF ↵↔↔[y]	
	2ndF ↵↔↔[x]	11.32623792

[12] MDF SET UP

5÷9=ANS	[ON/C] [SET UP] 0 0 [SET UP] 1 1	0.6
ANS×9=	5 ÷ 9 =	5.0
[FIX,TAB=1]	[X] 9 = *1	
	5 ÷ 9 = [2ndF] [MDF]	0.6
	[X] 9 = *2	5.4
	[SET UP] 0 3	

*1 $5.5555555555555 \times 10^{-1} \times 9$ *2 0.6×9

[13] DATA	(x,y)	\bar{x}	Sx	σ_x	n	$\sum x$	$\sum x^2$	\bar{y}
Sy	σ_y	Σy	Σy^2	Σxy	r	a	b	c
X'	y'	←→						

DATA								
95	[MODE] 1 0	0.						
80	95 [DATA]	1.						
80	80 [DATA]	2.						
75	[DATA]	3.						
75	75 (x,y) 3 [DATA]	4.						
75	50 [DATA]	5.						
\bar{x} =	[RCL] \bar{x}	75.71428571						
σ_x =	[RCL] σ_x	12.37179148						
n=	[RCL] n	7.						
$\sum x$ =	[RCL] $\sum x$	530.						
$\sum x^2$ =	[RCL] $\sum x^2$	41'200.						
Sx=	[RCL] Sx	13.3630621						
sx^2 =	[RCL] sx^2	178.5714286						

$$\frac{(95-\bar{x})}{Sx} \times 10 + 50 = \frac{(95 - 75.71428571)}{13.3630621} \times 10 + 50 = 64.43210706$$

x y	[MODE] 1 1	0.						
2 5	2 (x,y) 5 [DATA]	1.						
2 5	[DATA]	2.						
12 24	12 (x,y) 24 [DATA]	3.						
21 40	21 (x,y) 40 (x,y) 3 [DATA]	4.						
21 40	15 (x,y) 25 [DATA]	5.						
21 40	[RCL] a	1.050261097						
15 25	[RCL] b	1.826044386						
	[RCL] r	0.995176343						
	[RCL] Sx	8.541216597						
	[RCL] Sy	15.67223812						

$$x=3 \rightarrow y'=? \quad 3 [2ndF] y' \\ y=46 \rightarrow x'=? \quad 46 [2ndF] x'$$

x y	[MODE] 1 2	0.						
12 41	12 (x,y) 41 [DATA]	1.						
8 13	8 (x,y) 13 [DATA]	2.						
5 2	5 (x,y) 2 [DATA]	3.						
23 200	23 (x,y) 200 [DATA]	4.						
15 71	15 (x,y) 71 [DATA]	5.						
	[RCL] a	5.357506761						
	[RCL] b	-3.120289663						
	[RCL] c	0.503334057						

$$x=10 \rightarrow y'=? \quad 10 [2ndF] y' \\ y=22 \rightarrow x'=? \quad 22 [2ndF] x' \\ [2ndF] \leftarrow \rightarrow \\ [2ndF] \leftarrow \rightarrow$$

[14] DATA	▲	▼						
DATA	[MODE] 1 0	0.						
30	30 [DATA]	1.						
40	40 (x,y) 2 [DATA]	2.						
40	50 [DATA]	3.						
50								
↓								
DATA	▼	▼	▼					
30	45 (x,y) 3 [DATA]	X2 = 45.						
45		N2 = 3.						
45								
45								
60	60 [DATA]	X3 = 60.						

[15]

$$\bar{x} = \frac{\sum x}{n}$$

$$\sigma_x = \sqrt{\frac{\sum x^2 - n\bar{x}^2}{n-1}}$$

$$\Sigma x = x_1 + x_2 + \dots + x_n$$

$$\Sigma x^2 = x_1^2 + x_2^2 + \dots + x_n^2$$

$$\bar{y} = \frac{\sum y}{n}$$

$$\sigma_y = \sqrt{\frac{\sum y^2 - n\bar{y}^2}{n-1}}$$

$$\Sigma xy = x_1y_1 + x_2y_2 + \dots + x_ny_n$$

$$\Sigma y = y_1 + y_2 + \dots + y_n$$

$$\Sigma y^2 = y_1^2 + y_2^2 + \dots + y_n^2$$

[16]

Function	Dynamic range	
Funktion	zulässiger Bereich	
Fonction	Plage dynamique	
Función	Rango dinámico	
Função	Gama dinâmica	
Funzioni	Campi dinamici	
Functie	Rekencapaciteit	
Függvény	Megengedett számítási tartomány	
Funkce	Dynamický rozsah	
Funktion	Definitionsområde	
Funktio	Dynaaminen ala	
Fункция	Динамический диапазон	
Funktion	Dynamikområde	
ฟังก์ชัน	พื้นที่ในการคำนวณ	
الدالة	النطاق الالاتي	
函数	取值范围	
Fungsi	Julat dinamik	
Fungsi	Kisaran dinamis	
DEG:	x < 10 ¹⁰	
	(tan x : x ≠ 90 (2n-1))*	
sin x, cos x,	RAD:	x < $\frac{\pi}{180} \times 10^{10}$
tan x		(tan x : x ≠ $\frac{\pi}{2} (2n-1)$)*
	GRAD:	x < $\frac{10}{9} \times 10^{10}$
		(tan x : x ≠ 100 (2n-1))*
sin ⁻¹ x, cos ⁻¹ x	x ≤ 1	
tan ⁻¹ x, $3\sqrt{x}$	x < 10 ¹⁰⁰	
ln x, log x	10 ⁻⁹⁹ ≤ x < 10 ¹⁰⁰	
y ^x	• y > 0: -10 ¹⁰⁰ < x log y < 100	
	• y = 0: 0 < x < 10 ¹⁰⁰	
	• y < 0: x = n	
	(0 < x < 1 : $\frac{1}{x} = 2n-1$, x ≠ 0)*,	
	-10 ¹⁰⁰ < $\frac{1}{x} \log y < 100$	
$x\sqrt{y}$	• y > 0: -10 ¹⁰⁰ < $\frac{1}{x} \log y < 100$ (x ≠ 0)	
	• y = 0: 0 < x < 10 ¹⁰⁰	
	• y < 0: x = 2n-1	
	(0 < x < 1 : $\frac{1}{x} = n$, x ≠ 0)*,	
	-10 ¹⁰⁰ < $\frac{1}{x} \log y < 100$	
e ^x	-10 ¹⁰⁰ < x ≤ 230.2585092	
10 ^x	-10 ¹⁰⁰ < x < 100	
sinh x, cosh x,	x ≤ 230.2585092	
tanh x		
sinh ⁻¹ x	x < 10 ⁵⁰	
cosh ⁻¹ x	1 ≤ x < 10 ⁵⁰	
tanh ⁻¹ x	x < 1	
x^2	x < 10 ⁵⁰	
x^3	x < 2.15443469 × 10 ³³	
\sqrt{x}	0 ≤ x < 10 ¹⁰⁰	
x^{-1}	x < 10 ¹⁰⁰ (x ≠ 0)	
n!	0 ≤ n ≤ 69*	
nPr	0 ≤ r ≤ n ≤ 9999999999*	
	$\frac{n!}{(n-r)!} < 10^{100}$	

• • •

nCr	$0 \leq n \leq 9999999999^*$ $0 \leq r \leq 69$ $\frac{n!}{(n-r)!} < 10^{100}$
↔DEG, D°M'S	$0^{\circ}0'0.00001'' \leq x < 10000^{\circ}$
$x, y \rightarrow r, \theta$	$\sqrt{x^2 + y^2} < 10^{100}$
$r, \theta \rightarrow x, y$	$0 \leq r < 10^{100}$ DEG: $ \theta < 10^{10}$ RAD: $ \theta < \frac{\pi}{180} \times 10^{10}$ GRAD: $ \theta < \frac{10}{9} \times 10^{10}$
DRG ►	DEG→RAD, GRAD→DEG: $ x < 10^{100}$ RAD→GRAD: $ x < \frac{\pi}{2} \times 10^{98}$
→DEC →BIN →PEN →OCT →HEX AND OR XOR XNOR	DEC : $ x \leq 9999999999$ BIN : $1000000000 \leq x \leq 1111111111$ 0 ≤ x ≤ 1111111111 PEN : $2222222223 \leq x \leq 4444444444$ 0 ≤ x ≤ 2222222222 OCT : $4000000000 \leq x \leq 7777777777$ 0 ≤ x ≤ 3777777777 HEX : $FDABF41C01 \leq x \leq FFFFFFFFFF$ 0 ≤ x ≤ 2540BE3FF
NOT	BIN : $1000000000 \leq x \leq 1111111111$ 0 ≤ x ≤ 1111111111 PEN : $2222222223 \leq x \leq 4444444444$ 0 ≤ x ≤ 2222222221 OCT : $4000000000 \leq x \leq 7777777777$ 0 ≤ x ≤ 3777777777 HEX : $FDABF41C01 \leq x \leq FFFFFFFFFF$ 0 ≤ x ≤ 2540BE3FE
NEG	BIN : $1000000001 \leq x \leq 1111111111$ 0 ≤ x ≤ 1111111111 PEN : $2222222223 \leq x \leq 4444444444$ 0 ≤ x ≤ 2222222222 OCT : $4000000001 \leq x \leq 7777777777$ 0 ≤ x ≤ 3777777777 HEX : $FDABF41C01 \leq x \leq FFFFFFFFFF$ 0 ≤ x ≤ 2540BE3FF

* n, r: integer / ganze Zahlen / entier / entero / inteiro / intero / geheel getal / egész számok / celé číslo / heltal / kokonaisluku / целые / heltal / จำนวนเต็ม / عدد صحيح / 整数 / integer / bilangan bulat

In Europe:

This equipment complies with the requirements of Directive 89/336/EEC as amended by 93/68/EEC.

Dieses Gerät entspricht den Anforderungen der EG-Richtlinie 89/336/EWG mit Änderung 93/68/EWG.

Ce matériel répond aux exigences contenues dans la directive 89/336/CEE modifiée par la directive 93/68/CEE.

Dit apparaat voldoet aan de eisen van de richtlijn 89/336/EEG, gewijzigd door 93/68/EEG.

Dette udstyr overholder kravene i direktiv nr. 89/336/EEC med tillæg nr. 93/68/EEC.

Quest' apparecchio è conforme ai requisiti della direttiva 89/336/EEC come emendata dalla direttiva 93/68/EEC.

Η εγκατάσταση αυτή ανταποκρίνεται στις απαιτήσεις των οδηγιών της Ευρωπαϊκής Ένωσης 89/336/EOK, όπως ο κανονισμός αυτός συμπληρώθηκε από την οδηγία 93/68/EOK.

Este equipamento obedece às exigências da directiva 89/336/CEE na sua versão corrigida pela directiva 93/68/CEE.

Este aparato satisface las exigencias de la Directiva 89/336/CEE modificada por medio de la 93/68/CEE.

Denna utrustning uppfyller kraven enligt riktlinjen 89/336/EEC så som kompletteras av 93/68/EEC.

Dette produktet oppfyller betingelsene i direktivet 89/336/EEC i endringen 93/68/EEC.

Tämä laite täyttää direktiivin 89/336/EEC vaatimukset, jota on muutettu direktiivillä 93/68/EEC.

Данное устройство соответствует требованиям директивы 89/336/EEC с учетом поправок 93/68/EEC.

Ez a készülék megfelel a 89/336/EGK sz. EK-irányelvben és annak 93/68/EGK sz. módosításában foglalt követelményeknek.

Tento přístroj vyhovuje požadavkům směrnice 89/336/EEC v platném znění 93/68/EEC.

Nur für Deutschland/For Germany only:

Umweltschutz

Das Gerät wird durch eine Batterie mit Strom versorgt. Um die Batterie sicher und umweltschonend zu entsorgen, beachten Sie bitte folgende Punkte:

- Bringen Sie die leere Batterie zu Ihrer örtlichen Mülldeponie, zum Händler oder zum Kundenservice-Zentrum zur Wiederverwertung.
- Werfen Sie die leere Batterie niemals ins Feuer, ins Wasser oder in den Hausmüll.

Seulement pour la France/For France only:

Protection de l'environnement

L'appareil est alimenté par pile. Afin de protéger l'environnement, nous vous recommandons:

- d'apporter la pile usagée ou à votre revendeur ou au service après-vente, pour recyclage.
- de ne pas jeter la pile usagée dans une source de chaleur, dans l'eau ou dans un vide-ordures.

Endast svensk version/For Sweden only:

Miljöskydd

Denna produkt drivs av batteri.

Vid batteribyte skall följande iakttagas:

- Det förbrukade batteriet skall inlämnas till er lokala handlare eller till kommunal miljöstation för återinnsamling.
- Kasta ej batteriet i vattnet eller i hushållssoporna. Batteriet får ej heller utsättas för öppen eld.

OPMERKING: ALLEEN VOOR NEDERLAND/

NOTE: FOR NETHERLANDS ONLY

(NL) Batterij niet weggooien, maar inleveren als KCA. 